Exh. JBN-2
Docket UE-210795
Witness: Joel B. Nightingale

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of **PUGET SOUND ENERGY** **Clean Energy Implementation Plan** **Pursuant to WAC 480-100-640**	**DOCKET UE-210795**

EXHIBIT TO
TESTIMONY OF

JOEL B. NIGHTINGALE

STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION

Indications of Demand Response Increasing Cost-Effectiveness
Since Filing of PSE's 2021 CEIP

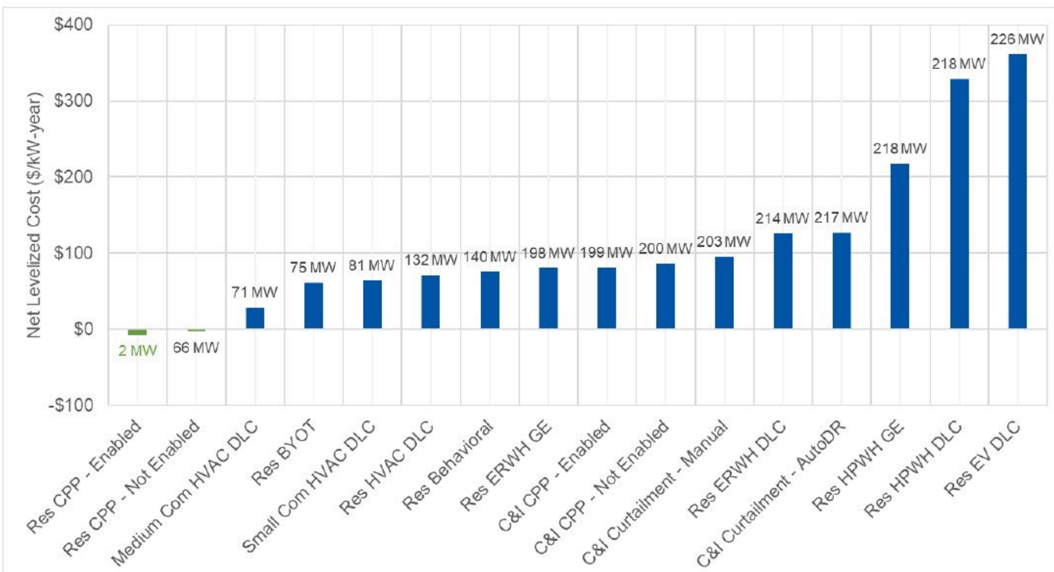
October 10, 2022

Indications of demand response increasing cost-effectiveness since PSE filed its final 2021 CEIP

1. Draft results from Conservation Potential Assessment (CPA)

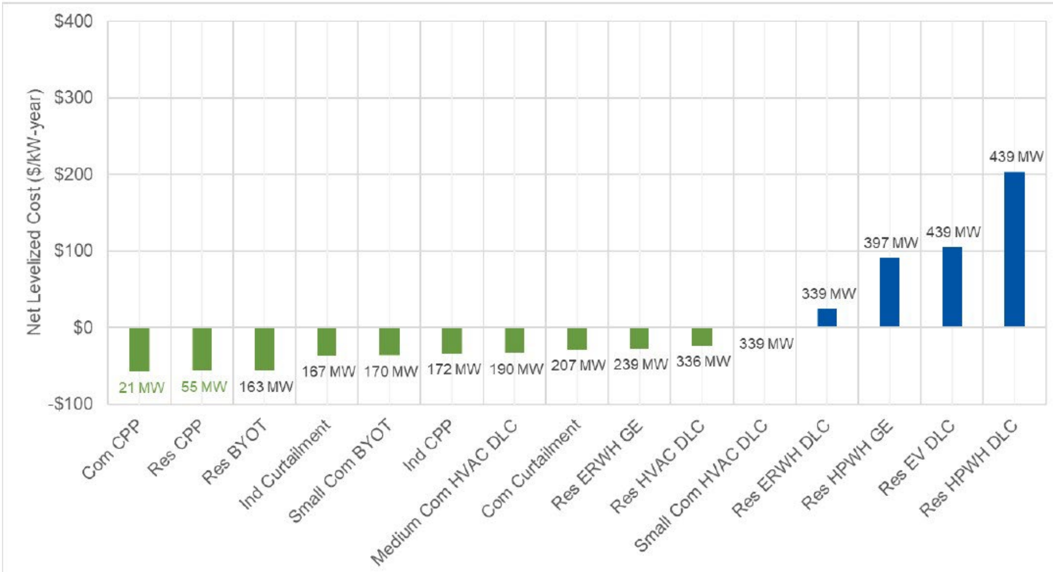
As part of its 2023 IRP progress report development process, PSE presented draft results from its 2023 CPA to stakeholders on September 13, 2022. These results included a slide comparing the levelized cost of demand response programs in the 2021 CPA and the 2023 CPA. Below are the charts excerpted from that presentation showing the comparison.[1]

2021 CPA



[1] See *2023 Electric Progress Report* presentation, slide 31 (9/13/2022). Available at: pse.com/irp/get-involved

2023 CPA



Comparing the two charts, PSE's understanding of many of the demand response products has clearly shifted from being a net cost to a net benefit to the system (hence the negative levelized cost for most of the products studied). For example, the Residential BYOT (bring your own thermostat) DR product decreased from about $60/kW-yr (2021 CPA) to about -$60/kW-yr (2023 CPA). Levelized cost is not the same as cost-effectiveness, but it is a key input for that calculation.

2. Early results from 2022 distributed energy resources request for proposals (DER RFP)

PSE's DER RFP Summary Report shows that demand response programs (as opposed to DER solar or battery storage) got the most interest from bidders in terms of both number of unique bidders and nameplate capacity (MW) of bids.[2]

In response to UTC Staff Data Request 009, PSE wrote that "through reviewing the bids received in the DER RFP, PSE has learned that there are DR resources available with a lower $/MW cost than the [2021] CPA and IRP modeled DR technologies." The company does hedge this finding with the caveat that "direct comparison between the CPA and IRP modeled DR resource and the bids received through the DER RFP is difficult at this phase in the acquisition process given that the CPA and the IRP modeled the DR resources individually by technology whereas the majority of the bids received in the DER RFP aggregate various DR technologies into a single bid."[3]

3. Demand response performance incentive mechanism

[2] See *2022 DER RFP: Proposal Summary*, Table 1, Docket UE-210878 (4/19/2022).
[3] Nightingale, Exhibit JBN-4, PSE response to WUTC Staff DR 009.

In its 2022 General Rate Case, PSE agreed to the following language (copied in relevant part, emphasis added) regarding a performance incentive mechanism for demand response:[4]

> 58. Demand Response ("DR") Performance Incentive Mechanism ("PIM"). The *Settling Parties accept PSE's proposed DR PIM* as described in the testimony of Dr. Mark Newton Lowry (Exh. MNL-1T), with the following modifications:
>
> a. The initial reward threshold will activate at 105 percent of the DR target. The initial reward from the DR PIM will be a percent of DR program costs equal to PSE's approved weighted average cost of capital ("WACC").
>
> b. The second reward threshold will activate if PSE exceeds 115 percent of the DR target. The reward for this threshold increases to 15 percent of DR program costs.
>
> c. As explained in Exh. MNL-1T at 30:4-5, no additional reward is provided for achievement levels in excess of 150 percent of the target.
>
> d. The *PIM is based on the DR target of 40 MW by 2024*, to be calculated in the same way that PSE calculates its peak load reduction for compliance with the DR target in PSE's CEIP. This does not replace the requirement to adopt a DR target in the CEIP. The Settling Parties reserve the right to support a higher target in the CEIP docket.

It should be noted that while the CEIP target spans the period through 2025, the GRC settlement stipulation only covers the period through 2024. While a performance incentive mechanism is not the same as a target, Staff does not believe that PSE would agree to a performance incentive mechanism that sets an unreasonably high threshold for realizing the incentive. PSE agreeing to this 40 MW threshold can reasonably be interpreted as an acknowledgement that PSE believes *at least* 40 MW of demand response will be cost-effective by 2024.

[4] *Wash. Utils. & Transp. Comm'n v. Puget Sound Energy*, Dockets UE-220066 & UG-220067, Settlement Stipulation and Agreement on Revenue Requirement and All Other Issues Except Tacoma LNG and PSE's Green Direct Program at 29 (Aug. 26, 2022).